

February, 1975

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INFORMATION

GATHERED

FOR

THE

PURPOSE

OF

DELINEATING

HSA

PLANNING

REGION

BORDERS

Division of Comprehensive
Health Planning
State Department of Health
and Environmental Sciences

TABLE OF CONTENTS

	Page
Population Density, Change and Estimates by District, 1973 (Map)	1
Population Density, Change and Estimates by County and District, 1973 (Table)	2
Population Density, Change and Estimates by District, 1973 (Table)	5
Distribution of MD's by Specialty (Map)	6
MD Ratio by District (Map).	7
MD Ratio by District (Specialists) (Map).	8
DDS Ratio by District (Map)	9
RN Ratio by District (Map).	10
Health Manpower Distribution (Table).	11
Distribution by County--Allied Health Manpower (Map). . . .	14
Allied Health Manpower Distribution (Table)	15
Health Manpower Training Programs (Map)	18
Health Manpower Training Programs (Table)	19
Non-Federal Hospital Services by County (Specialized) (Map).	20
Non-Federal Hospital Services by County (Specialized) (Table).	21
Non-Federal Hospital Services by County (Highly Special- ized) (Map).	24
Non-Federal Hospital Services by County (Highly Special- ized) (Table)	25
Hospitals from Hill-Burton Plan, EMS Districts (Map). . .	26
Family Planning Programs (Map).	27
Mental Health Regions, Centers, Satellites, Clinics and Hospitals (Map).	28

Rehabilitation Facilities and Districts (Map)	29
Organized Public Health Departments (Map)	30
Drug & Alcoholism Inpatient Centers (Map)	31
CHP Planning Districts (Map)	32
Developmental Disabilities Centers and Regions (Map)	33
Governor's Manpower Planning Council Planning Districts (Map)	34
Indian Population (Map)	35
Economic Trade Areas (Map)	36
Montana Multi-County Districts (Map)	37
Explanation of POS Maps	38
§ Hospital Admissions by District--Rank Order (Table)	39
§ Hospital Admissions by District--POS (Table)	40
§ Hospital Admissions by District--District 1 (Map)	41
§ Hospital Admissions by District--District 2 (Map)	42
§ Hospital Admissions by District--District 3 (Map)	43
§ Hospital Admissions by District--District 4 (Map)	44
§ Hospital Admissions by District--District 5 (Map)	45
§ Hospital Admissions by District--District 6 (Map)	46
§ Hospital Admissions by District--District 7 (Map)	47
§ Hospital Admissions by District--District 8 (Map)	48
§ Hospital Admissions by District--District 9 (Map)	49
§ Hospital Admissions by District--District 10 (Map)	50
§ Hospital Admissions by District--District 11 (Map)	51
§ Hospital Admissions by District--District 12 (Map)	52
Computerized Selection of HSA Areas	53
5 HSA Proposal (Map)	55
4 HSA Proposal (Map)	56
3 HSA Proposal (Map)	57

POPULATION DENSITY, CHANGE AND
ESTIMATES BY COUNTY AND DISTRICT (1973)

District	1973 Estimates	1970 Census	Percent Change	Square Miles	People Per Square Mile
<u>District 1</u>					
Phillips	5,200	5,386		5,213	.997
Valley	13,300	11,471		4,974	2.673
Daniels	3,100	3,083		1,443	2.148
Sheridan	5,500	5,779		1,694	3.246
Roosevelt	10,000	10,365		2,385	4.192
	<u>37,100</u>	<u>36,084</u>	2.8%	<u>15,709</u>	<u>2.361</u>
<u>District 2</u>					
Garfield	1,800	1,796		4,455	.404
McCone	2,800	2,875		2,607	1.074
Richland	9,700	9,837		2,079	4.665
Dawson	10,900	11,269		2,370	4.599
Prairie	2,000	1,752		1,730	1.156
Wibaux	1,400	1,465		890	1.573
	<u>28,600</u>	<u>28,994</u>	-1.3%	<u>14,131</u>	<u>2.023</u>
<u>District 3</u>					
Treasure	1,100	1,069		985	1.116
Rosebud	6,600	6,032		5,037	1.310
Custer	11,300	12,174		3,756	3.008
Fallon	3,800	4,050		1,633	2.327
Carter	1,800	1,956		3,313	.543
Powder River	2,100	2,862		3,288	.638
	<u>26,700</u>	<u>28,143</u>	-5.1%	<u>18,012</u>	<u>1.482</u>
<u>District 4</u>					
Liberty	2,500	2,359		1,439	1.737
Hill	17,600	17,358		2,927	6.012
Blaine	6,800	6,727		4,275	1.590
	<u>26,900</u>	<u>26,444</u>	1.7%	<u>8,641</u>	<u>3.113</u>
<u>District 5</u>					
Glacier	11,400	10,783		2,964	3.846
Toole	5,500	5,839		1,950	2.820
Pondera	7,200	6,611		1,645	4.376
Teton	6,600	6,116		2,294	2.877
Chouteau	5,900	6,473		3,927	1.502
Cascade	83,700	81,804		2,661	31.454
	<u>120,300</u>	<u>117,626</u>	2.2%	<u>15,441</u>	<u>7.790</u>

POPULATION DENSITY, CHANGE AND
ESTIMATES BY COUNTY AND DISTRICT (1973)

District	1973 Estimates	1970 Census	Percent Change	Square Miles	People Per Square Mile
<u>District 6</u>					
Judith Basin	2,600	2,667		1,880	1.382
Fergus	12,700	12,611		4,242	2.993
Petroleum	600	675		1,655	.362
Wheatland	2,500	2,529		1,420	1.760
Golden Valley	1,000	931		1,176	.850
Musselshell	4,100	3,734		1,887	2.172
	<u>23,500</u>	<u>23,147</u>	1.5%	<u>12,260</u>	<u>1.916</u>
<u>District 7</u>					
Sweet Grass	3,000	2,980		1,840	1.630
Stillwater	4,800	4,632		1,794	2.675
Yellowstone	92,300	87,367		2,642	34.935
Big Horn	11,100	10,057		5,023	2.209
Carbon	7,800	7,080		2,066	3.775
	<u>119,000</u>	<u>112,116</u>	6.1%	<u>13,365</u>	<u>8.903</u>
<u>District 8</u>					
Lewis and Clark	35,500	33,281		3,476	10.212
Jefferson	6,700	5,238		1,652	4.055
Broadwater	2,700	2,526		1,193	2.263
	<u>44,900</u>	<u>41,045</u>	9.3%	<u>6,321</u>	<u>7.103</u>
<u>District 9</u>					
Meagher	2,200	2,122		2,354	.934
Gallatin	35,800	32,505		2,517	14.223
Park	11,800	11,197		2,626	4.493
	<u>49,800</u>	<u>45,824</u>	8.6%	<u>7,497</u>	<u>6.642</u>
<u>District 10</u>					
Lincoln	17,700	18,063		3,714	4.765
Flathead	40,600	39,460		5,137	7.903
Lake	15,600	14,445		494	31.578
Sanders	7,400	7,093		2,778	2.663
	<u>81,300</u>	<u>79,061</u>	2.8%	<u>12,123</u>	<u>6.706</u>
<u>District 11</u>					
Mineral	3,300	2,958		1,222	2.700
Missoula	61,200	58,263		2,612	23.430
Ravalli	16,900	14,409		2,382	7.094
	<u>81,400</u>	<u>75,630</u>	7.6%	<u>6,216</u>	<u>13.095</u>

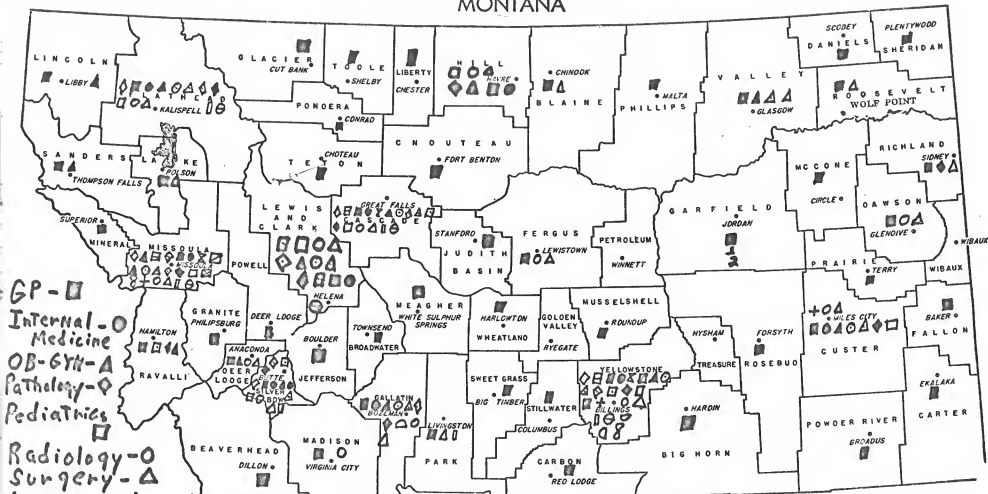
POPULATION DENSITY, CHANGE AND
ESTIMATES BY COUNTY AND DISTRICT (1973)

District	1973 Estimates	1970 Census	Percent Change	Square Miles	People Per Square Mile
<u>District 12</u>					
Powell	6,800	6,660		2,336	2.910
Granite	2,600	2,737		1,733	1.500
Deer Lodge	15,800	15,652		740	21.351
Silver Bow	42,200	41,981		715	59.020
Beaverhead	8,000	8,187		5,551	1.441
Madison	5,600	5,014		3,528	1.587
	<u>81,000</u>	<u>80,231</u>	.9%	<u>14,603</u>	<u>5.546</u>
TOTAL	721,000	694,409		145,587	4.952

POPULATION DENSITY, CHANGE AND
ESTIMATES BY DISTRICT (1973)

District #	People Per Sq. Mile	Percent Change	Estimated Population
District 1	2.4	2.8%	37,100
District 2	2.0	-1.3%	28,600
District 3	1.5	-5.2%	26,700
District 4	3.1	1.7%	26,900
District 5	7.8	2.2%	120,300
District 6	1.9	1.5%	23,500
District 7	8.9	6.1%	119,000
District 8	7.1	9.3%	44,900
District 9	6.6	8.6%	49,000
District 10	6.7	2.8%	81,300
District 11	13.1	7.6%	81,400
District 12	5.6	.9%	81,000
<hr/>			
State	5.0	3.8%	721,000

Distribution of M.D.'s by Specialty
MONTANA



GP - ☐
Internal Medicine - ☐
OB-GYN -
Pathology -
Pediatrics - ☐
Radiology - ☐
Surgery -
Anesthesiology -
Dermatology - ☐
Ophthalmology - ☐

Optthalmology - Δ (otology) (Rhino)logy

Orthopedic Surgery - ♦

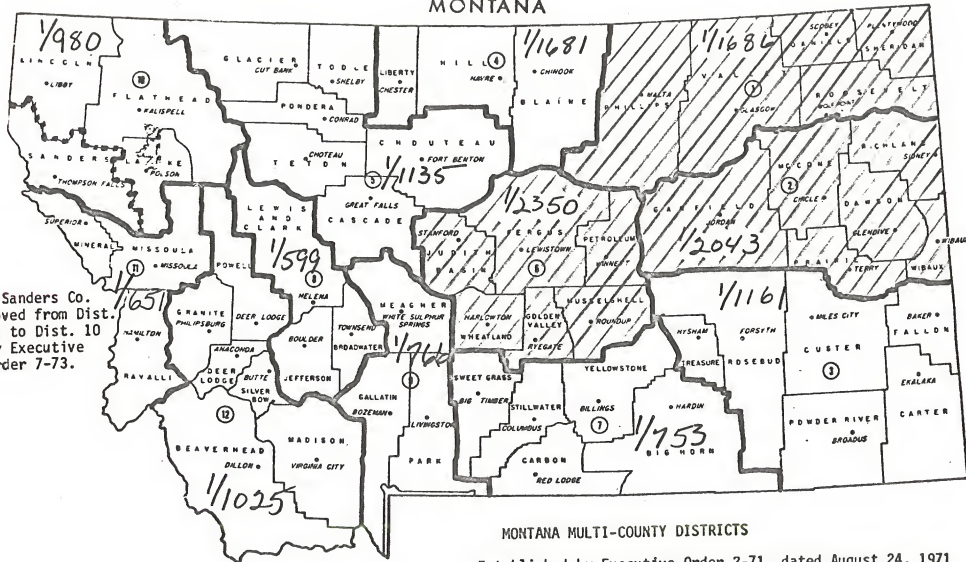
Otolology - □

Urology - 0

Adolescent Medicine - Δ
Emergency Room M.D. - \diamond
Neurological Surgery - \times

Allergy - ☺
 Proctology - ☺
 Neurology - ☒
 Plastic Surgery - ☒
 Preventive M.D. - ♂
 Psychiatry - +
 Thoracic Surgery - ☐

MONTANA



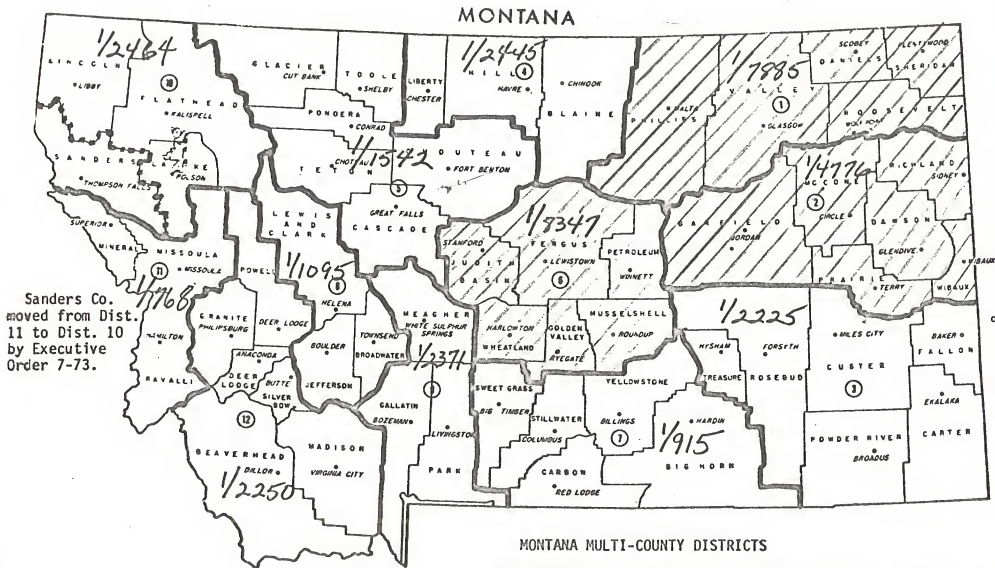
Sanders Co.
moved from Dist.
11 to Dist. 10
by Executive
Order 7-73.

MONTANA MULTI-COUNTY DISTRICTS

Established by Executive Order 2-71, dated August 24, 1971
Amended by Executive Order 7-73, dated October 29, 1973

111-Lower Quintile

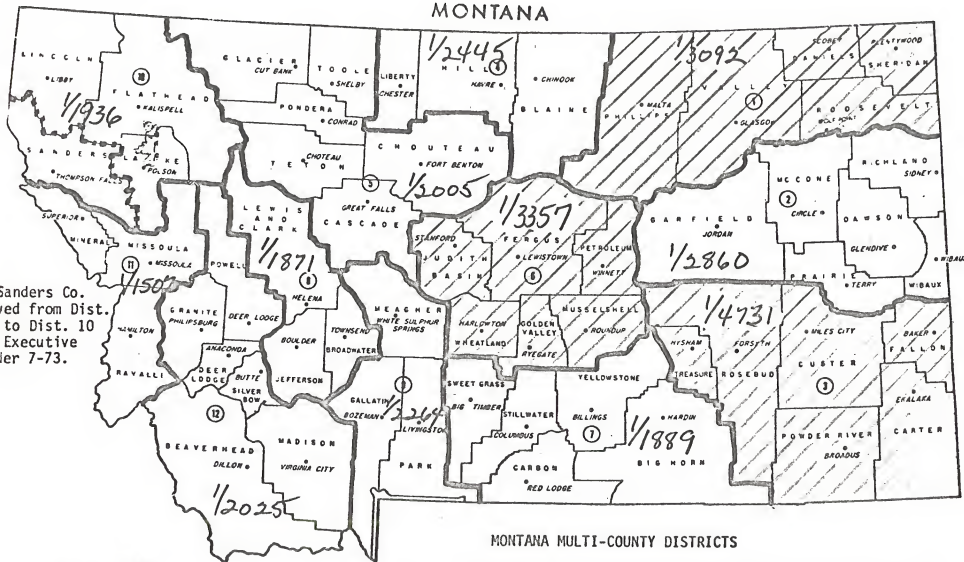
MD RATIO BY DISTRICTS (SPECIALISTS)



Established by Executive Order 2-71, dated August 24, 1971
Amended by Executive Order 7-73, dated October 29, 1973

111-Lower Quantile

MONTANA



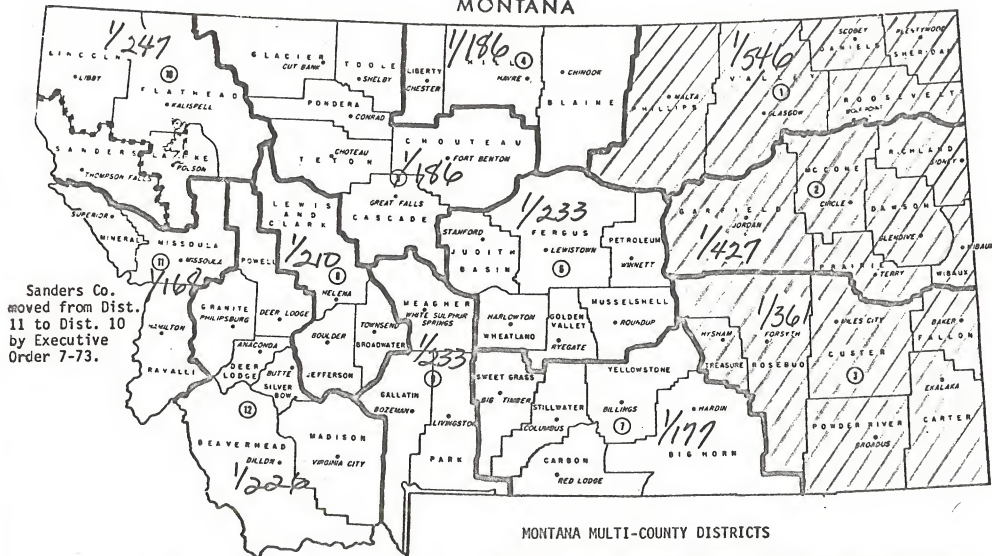
MONTANA MULTI-COUNTY DISTRICTS

Established by Executive Order 2-71, dated August 24, 1971
Amended by Executive Order 7-73, dated October 29, 1973

111- Lower Granite

RN RATIO BY DISTRICT

MONTANA



Established by Executive Order 2-71, dated August 24, 1971
Amended by Executive Order 7-73, dated October 29, 1973

111 - Lower Quintile

HEALTH MANPOWER DISTRIBUTION

Source: CHP Health Manpower
Study - 1974

Counties By District	# MD's Total	# MD's (Specialists)	District Ratio MD/Person	# Dentists	District Ratio DDS/Person	# RN's	District Ratio RN's/Person
District 1							
Phillips	2	0	-	1	-	7.0	-
Valley	8	3	-	6	-	15.5	-
Daniels	2	1	-	0	-	7.5	-
Sheridan	2	0	-	3	-	14.0	-
Roosevelt	5+3*=8	1	-	2	-	24.0	-
District Total	22	5	1/1686	12	1/3092	68.0	1/546
District 2							
Garfield	1	0	-	0	-	2.5	-
McCone	1	0	-	1	-	3.5	-
Richland	5	2	-	4	-	23.0	-
Dawson	6	4	-	5	-	28.0	-
Prairie	1	0	-	0	-	9.5	-
Wibaux	0	0	-	0	-	0	-
District Total	14	6	1/2043	10	1/2860	66.5	1/427
District 3							
Treasure	0	0	-	0	-	2	-
Rosebud	3+2*=5	0	-	1	-	7.5	-
Custer	14	12	-	5	-	49.0	-
Fallon	2	0	-	0	-	5.5	-
Carter	1	0	-	0	-	9.0	-
Powder River	1	0	-	0	-	1.0	-
District Total	23	12	1/1161	6	1/4731	74.0	1/361
District 4							
Liberty	1	0	-	1	-	8.0	-
Hill	12+1*=13	10	-	8	-	112.0	-
Blaine	2	1	-	2	-	25.0	-
District Total	16	11	1/1681	11	1/2445	145.0	1/186

Counties By District	# MD's Total	# MD's (Specialists)	District Ratio MD/Person	# Dentists	District Ratio DDS/Person	# RN's	District Ratio RN's/Person
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District 5

Glacier	2+6*=8	0	-	4	-	42.0	-
Toole	2	0	-	2	-	19.0	-
Pondera	4	0	-	4	-	45.0	-
Teton	3	0	-	2	-	39.0	-
Choteau	2	0	-	2	-	3.0	-
Cascade	87	78	-	46	-	498.0	-

District Total	106	78	1/1135	60	1/2005	646.0	1/186
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District 6

Judith Basin	0	0	-	0	-	9.0	-
Fergus	8	3	-	5	-	65.0	-
Petroleum	0	0	-	0	-	0.0	-
Wheatland	1	0	-	1	-	9.0	-
Golden Val.	0	0	-	0	-	2.0	-
Musselshell	1	0	-	1	-	16.0	-

District Total	10	3	1/2350	7	1/3357	101.0	1/233
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District 7

Sweet Grass	1	0	-	1	-	1.0	-
Stillwater	2	0	-	2	-	20.0	-
Yellowstone	145	130	-	56	-	591.0	-
Big Horn	1+5*=6	0	-	1	-	34.0	-
Carbon	4	0	-	3	-	31.0	-

District Total	158	130	1/753	63	1/1889	677.0	1/177
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District 8

Lewis & Cl.	69	41	-	21	-	181.5	-
Jefferson	3	0	-	1	-	22.5	-
Broadwater	3	0	-	1	-	10.0	-

District Total	75	41	1/599	24	1/1871	214.0	1/210
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District 9

Meagher	1	0	-	1	-	4.5	-
Gallatin	53	17	-	15	-	166.5	-
Park	11	4	-	6	-	42.0	-

District Total	65	21	1/766	22	1/2264	213.0	1/233
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*PHS Physicians

Counties By District	# MD's Total	# MD's (Specialists)	District Ratio MD/Person	# Dentists	District Ratio DDS/Person	# RN's	District Ratio RN's/Person
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District 10

Lincoln	7	1	-	6	-	53.0	-
Flathead	66	30	-	27	-	176.0	-
Lake	7	1	-	7	-	70.0	-
Sanders	3	1	-	2	-	30.0	-

District Total	83	33	1/980	42	1/1936	329.0	1/247
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District 11

Mineral	2	0	-	1	-	11.0	-
Missoula	110	102	-	43	-	402.0	-
Ravalli	13	4	-	10	-	71.0	-

District Total	125	106	1/651	54	1/1507	484.0	1/168
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District 12

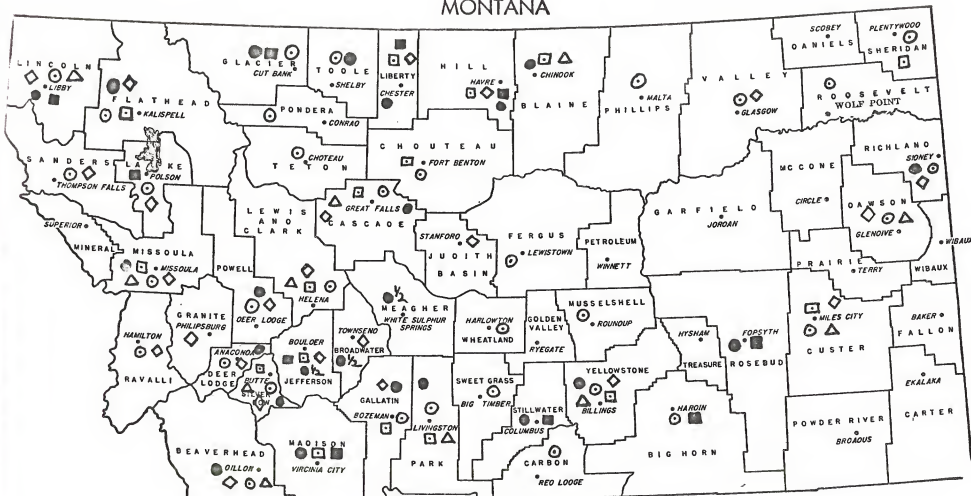
Powell	8	0	-	3	-	27.0	-
Granite	1	0	-	1	-	9.5	-
Deer Lodge	19	4	-	4	-	76.0	-
Silver Bow	44	31	-	26	-	212.0	-
Beaverhead	3	0	-	5	-	13.0	-
Madison	4	1	-	1	-	21.0	-

District Total	79	36	1/1025	40	1/2025	358.5	1/226
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Montana Totals	776	482	1/929 MD 1/1496 Spec.	351	1/2054	3376.0	1/214
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DISTRIBUTION BY COUNTY - ALLIED HEALTH MANPOWER

MONTANA



- DENTAL HYGIENISTS
- OPTOMETRISTS
- △ OSTEOPATHS
- ◇ PHYSICAL THERAPISTS
- PHYSICIAN ASSISTANTS
- SPEECH THERAPISTS AND AUDIOLOGISTS

ALLIED HEALTH MANPOWER DISTRIBUTION

	Dental Hygienists	Optometrists	Osteopaths	Physical Therapists	Physician Assistants	Speech Therapists & Audiologists
<u>District 1</u>						
Phillips	0	1	0	0	0	0
Valley	0	3	0	1	0	0
Daniels	0	0	0	0	0	0
Sheridan	1	1	0	0	0	0
Roosevelt	0	2	0	0	0	0
District Total	1	6	0	1	0	0
<u>District 2</u>						
Garfield	0	0	0	0	0	0
McCone	0	0	0	0	0	0
Richland	0	3	0	1	0	1
Dawson	0	3	1	1	0	0
Prairie	0	0	0	0	0	0
Wibaux	0	0	0	0	0	0
District Total	0	6	1	2	0	1
<u>District 3</u>						
Treasure	0	0	0	0	0	0
Rosebud	0	0	0	0	1	1
Custer	1	2	1	1	0	0
Fallon	0	0	0	0	0	0
Carter	0	0	0	0	0	0
District Total	1	2	1	1	1	1
<u>District 4</u>						
Liberty	1	0	0	1	1	0
Hill	1	4	0	2	1	1
Blaine	1	0	1	0	0	3
District Total	3	4	1	3	2	4
<u>District 5</u>						
Glacier	0	2	0	0	1	1
Toole	0	1	0	0	0	1
Pondera	0	2	0	0	0	0

ALLIED HEALTH MANPOWER DISTRIBUTION (cont.)

	Dental Hygienists	Optometrists	Osteopaths	Physical Therapists	Physician Assistants	Speech Therapists & Audiologists
<u>District 5</u> (cont.)						
Teton	0	1	0	0	0	0
Chouteau	1	1	0	0	0	0
Cascade	9	11	3	11	0	19
District Total	10	18	3	11	1	21
<u>District 6</u>						
Judith Basin	0	0	0	0	0	0
Fergus	0	4	0	0	0	0
Petroleum	0	0	0	0	0	0
Wheatland	0	2	0	0	0	0
Golden Valley	0	0	0	0	0	0
Musselshell	0	1	0	0	0	0
District Total	0	7	0	0	0	0
<u>District 7</u>						
Sweet Grass	0	1/2	0	0	0	0
Stillwater	0	0	0	0	1	2
Yellowstone	9	8	2	7	0	16
Big Horn	0	1/2	0	0	1	0
Carbon	0	1	0	0	0	0
District Total	9	10	2	7	2	18
<u>District 8</u>						
Lewis & Clark	8	6	3	5	0	11
Jefferson	1	0	0	0	1	1/2
Broadwater	0	0	0	1	0	1/2
District Total	9	6	3	6	1	12
<u>District 9</u>						
Meagher	0	0	0	0	0	1/2
Gallatin	1	5	0	5	0	5
Park	1	2	1	0	0	2 1/2
District Total	2	7	1	5	0	8

ALLIED HEALTH MANPOWER DISTRIBUTION (cont.)

	Dental Hygienists	Optometrists	Osteopaths	Physical Therapists	Physician Assistants	Speech Therapists & Audiologists
<u>District 10</u>						
Lincoln	0	2	1	1	1	2
Flathead	4	8	0	2	0	5
Lake	0	1	0	2	0	0
Sanders	0	1	0	1	0	0
District Total	4	12	1	6	1	7
<u>District 11</u>						
Mineral	0	0	0	0	0	0
Missoula	9	6	1	13	0	23
Ravalli	0	2	0	2	0	0
District Total	9	8	1	15	0	23
<u>District 12</u>						
Powell	0	1	0	1	0	1
Granite	0	0	0	1	0	0
Deer Lodge	0	2	0	1	0	2
Silver Bow	2	6	2	8	0	7
Beaverhead	0	3	1	1	0	1
Madison	1	0	0	1	0	1
District Total	3	12	3	13	0	12
MONTANA	51	98	17	70	8	107

Health Manpower Training Programs

MONTANA



Pre-Medicine - ■
WAMI - ●
Pre-Dental - ▲

Dental Hygiene - ◆ Nurse Aid - ▲
Dental Assistants - □ Medical Records - ◆
Medical Technology - ○ Pharmacy - □
Medical Lab. Asst. - △
Sanitarians - ◆
Nursing - □
Pract. Nursing - ○

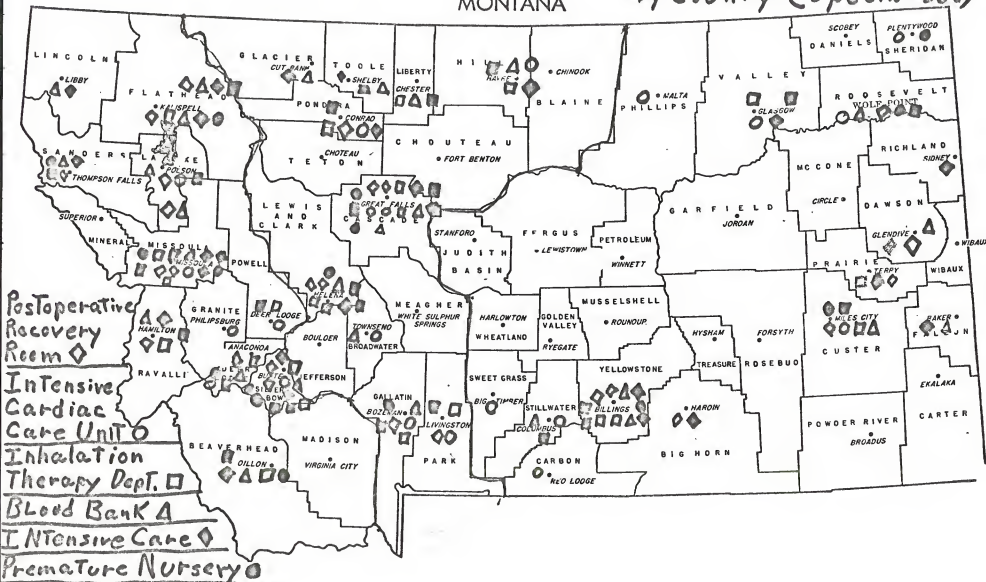
HEALTH MANPOWER TRAINING PROGRAMS

Source: Montana Commission on
Post-Secondary Education;
Technical Report on
Health Care Education

Cascade	Pre-Medicine, Pre-Dental, Dental Assistants, Practical Nursing, Nurse Aid
Custer	Nursing
Deer Lodge	Practical Nursing
Gallatin	Practical Nursing, WAMI, Pre-Medicine, Sanitarians, Pre-Dental, Medical Technology, Nursing, Medical Lab Assistant (2), Nurse Aid
Hill	Practical Nursing, Nursing, Medical Lab Assistant
Lewis and Clark	Medical Records, Medical Lab Assistant, Nursing, Practical Nursing, Pre-Medicine, Pre-Dental, Dental Hygiene, Medical Technology
Missoula	Practical Nursing, Pharmacy, Pre-Medicine, Pre-Dental, Medical Technology, Nursing
Silver Bow	Dental Assistants, Practical Nursing, Nurse Aid
Yellowstone	Pre-Medicine (2), Pre-Dental (2), Practical Nursing, Nurse Aid

Non-federal Hosp. Services by County (Specialized)

MONTANA



Postoperative
Recovery
Room

Intensive
Cardiac
Care Unit

Inhalation
Therapy Dept.

Blood Bank

Intensive Care

Premature Nursery

No. 1052 — County Outline Map
STATE PUBLISHING COMPANY
Helena

100 Pads - QQ - WQ

Physical Therapy

Non-Federal Hospital Services
By County (Specialized)

Source: The AHA Guide to the Health
Care Field 1974

Beaverhead	Premature Nursery, Intensive Care Units, Physical Therapy Dept., Inhalation Therapy Dept., Blood Bank
Big Horn	Intensive Care Unit, Postoperative Recovery Room
Broadwater	Blood Bank, Intensive Cardiac Care Unit
Carbon	Intensive Cardiac Care Unit
Cascade	Intensive Care Unit (2), Inhalation Therapy Dept. (2), Blood Bank (2), Premature Nursery (2), Postoperative Recovery Room (2), Intensive Cardiac Care Unit (2), Physical Therapy Dept. (2),
Custer	Inhalation Therapy Dept., Blood Bank, Premature Nursery, Postoperative Recovery Room, Intensive Cardiac Care Unit, Physical Therapy Dept.
Dawson	Intensive Care Unit, Blood Bank, Postoperative Recovery Room
Deer Lodge	Postoperative Recovery Room, Premature Nursery, Blood Bank, Inhalation Therapy Dept., Intensive Cardiac Care Unit, Physical Therapy Dept.
Fallon	Blood Bank, Intensive Care Unit
Flathead	Inhalation Therapy Dept., Blood Bank (2), Postoperative Recovery Room (2), Premature Nursery, Intensive Care Unit (2), Physical Therapy Dept.
Gallatin	Inhalation Therapy Dept., Blood Bank, Postoperative Recovery Room, Premature Nursery, Intensive Cardiac Care Unit, Physical Therapy Dept.
Glacier	Blood Bank, Intensive Care Unit
Granite	Intensive Cardiac Care Unit
Hill	Inhalation Therapy Dept. Blood Bank, Intensive Care, Unit, Intensive Cardiac Care Unit, Physical Therapy Dept.
Lake	Blood Bank (2), Postoperative Recovery Room (2), Intensive Cardiac Care Unit, Physical Therapy Dept.
Lewis and Clark	Inhalation Therapy Dept. (2), Blood Bank, Postoperative Recovery Room (2), Premature Nursery, Intensive Care Unit, Physical Therapy Dept. (2)

Liberty	Inhalation Therapy Dept., Blood Bank, Physical Therapy Department
Lincoln	Blood Bank, Intensive Care Unit
Missoula	Inhalation Therapy Dept. (3), Blood Bank, Postoperative Recovery Room (2), Premature Nursery (2), Intensive Care Unit (3), Intensive Cardiac Care Unit, Physical Therapy Dept.
Park	Inhalation Therapy Dept., Postoperative Recovery Room, Intensive Cardiac Care Unit, Physical Therapy Dept.
Phillips	Intensive Cardiac Care Unit
Pondera	Inhalation Therapy Dept., Postoperative Recovery Room, Intensive Care Unit, Intensive Cardiac Care Unit, Physical Therapy Dept.
Powell	Inhalation Therapy Dept., Intensive Cardiac Care Unit, Physical Therapy Dept.
Prairie	Intensive Care Unit, Postoperative Recovery Room, Inhalation Therapy Dept.
Ravalli	Intensive Care Unit, Physical Therapy Dept., Postoperative Recovery Room, Blood Bank, Inhalation Therapy Dept.
Richland	Intensive Care Unit
Roosevelt	Physical Therapy Dept., Premature Nursery, Postoperative Recovery Room, Blood Bank, Intensive Cardiac Care Unit
Sanders	Blood Bank, Postoperative Recovery Room, Premature Nursery, Physical Therapy Dept., Intensive Care Unit
Sheridan	Intensive Cardiac Care Unit, Premature Nursery
Silver Bow	Physical Therapy Dept. (2), Intensive Care Unit (2), Intensive Cardiac Care Unit, Inhalation Therapy Dept. (2), Blood Bank, Postoperative Recovery Room (2), Premature Nursery (2),
Stillwater	Physical Therapy Dept., Intensive Cardiac Care Unit, Blood Bank
Sweet Grass	Intensive Cardiac Care Unit
Toole	Physical Therapy Dept., Intensive Care Unit, Blood Bank

Valley

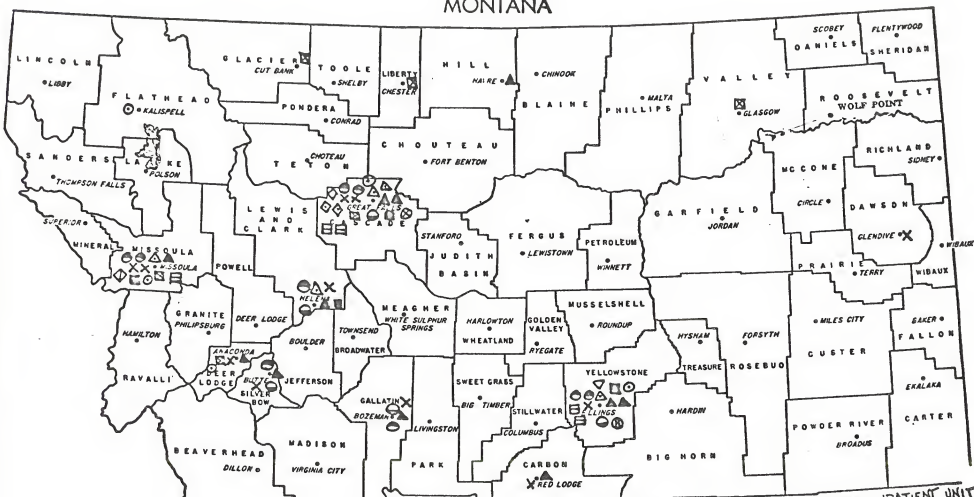
Physical Therapy Dept., Intensive Care Unit, Intensive Cardiac Care Unit, Inhalation Therapy Dept.

Yellowstone

Blood Bank (2), Postoperative Recovery Room (2), Premature Nursery, Physical Therapy Dept. (2), Intensive Care Unit (2), Inhalation Therapy Dept. (2)

NON-FEDERAL HOSPITAL SERVICES BY COUNTY (HIGHLY SPECIALIZED)

MONTANA



- △ THERAPEUTIC RADIOISOTOPE FACILITY
- ▲ DIAGNOSTIC RADIOISOTOPE FACILITY
- RADIUM THERAPY
- COBALT THERAPY
- X XRAY THERAPY
- ⊕ OPEN HEART SURGERY
- ⊠ OCCUPATIONAL THERAPY DEPARTMENT
- ◇ REHABILITATION INPATIENT UNIT
- ◇ REHABILITATION OUTPATIENT UNIT

- PSYCHIATRIC INPATIENT UNIT
- PSYCHIATRIC OUTPATIENT UNIT
- ⊠ EEG
- ◇ ORGAN BANK
- ▽ MEGAVOLTAGE RADIATION THERAPY

NON-FEDERAL HOSPITAL SERVICES BY COUNTY
(HIGHLY SPECIALIZED)

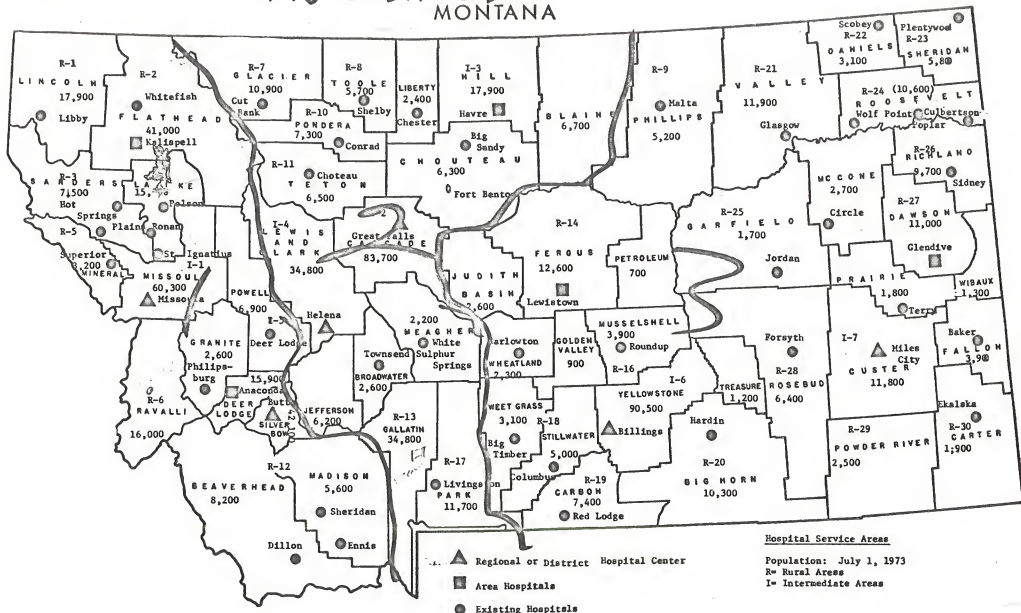
Source: The AHA Guide to the
Health Care Field -
1974

Carbon	x-ray therapy, diagnostic radioisotope facility
Cascade	x-ray therapy (2), occupational therapy department, rehabilitation inpatient unit, rehabilitation outpatient unit (2), renal dialysis - inpatient (2), renal dialysis - outpatient, E.E.G. (2), psychiatric inpatient, psychiatric outpatient, therapeutic radioisotope (2), diagnostic radioisotope (2), radium therapy (2), cobalt therapy, burn, infant intensive care
Dawson	x-ray therapy
Deer Lodge	x-ray therapy, occupational therapy, psychiatric inpatient, diagnostic radioisotope facility
Flathead	psychiatric inpatient unit
Gallatin	x-ray therapy, diagnostic radioisotope facility, radium therapy, cobalt therapy
Glacier	occupational therapy
Hill	diagnostic radioisotope
Lewis & Clark	x-ray therapy, renal dialysis - outpatient, renal dialysis - inpatient, therapeutic radioisotope, diagnostic radioisotope, radium therapy, cobalt therapy
Liberty	occupational therapy
Missoula	x-ray therapy (2), occupational therapy, organ banks, renal dialysis - inpatient, E.E.G., psychiatric inpatient, therapeutic radioisotope, diagnostic radioisotope, radium therapy (2), infant intensive care
Silver Bow	x-ray therapy, diagnostic radioisotope, radium therapy, cobalt therapy
Valley	occupational therapy
Yellowstone	x-ray therapy, open heart surgery, renal dialysis - outpatient, renal dialysis - inpatient, E.E.G. (2), psychiatric inpatient, therapeutic radioisotope, diagnostic radioisotope (2), cobalt therapy, infant intensive care, megavoltage radiation therapy, radium therapy (2)

Hospitals from Hill Benton Plan

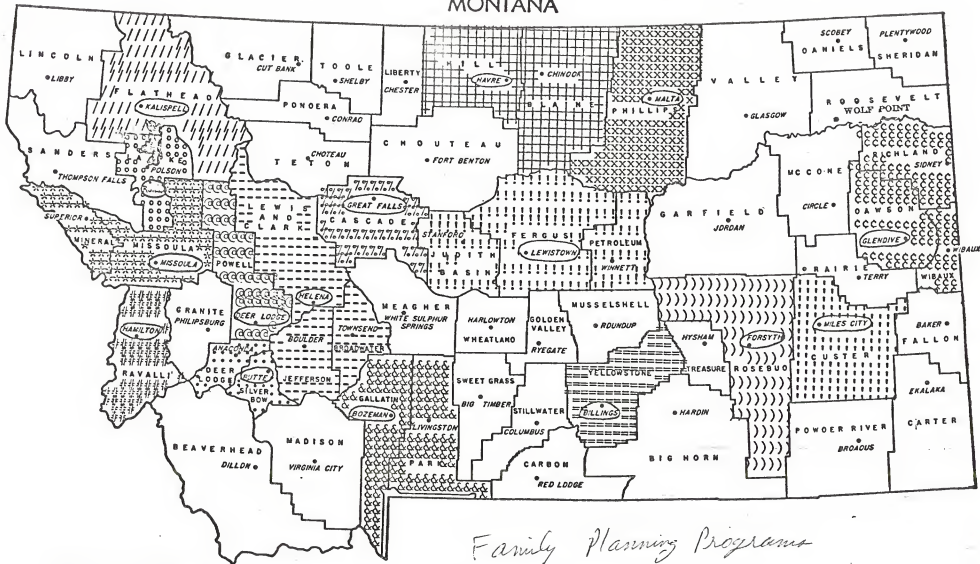
EMS Districts

MONTANA



Hospitals (from Hill Benton Plan) and EMS districts

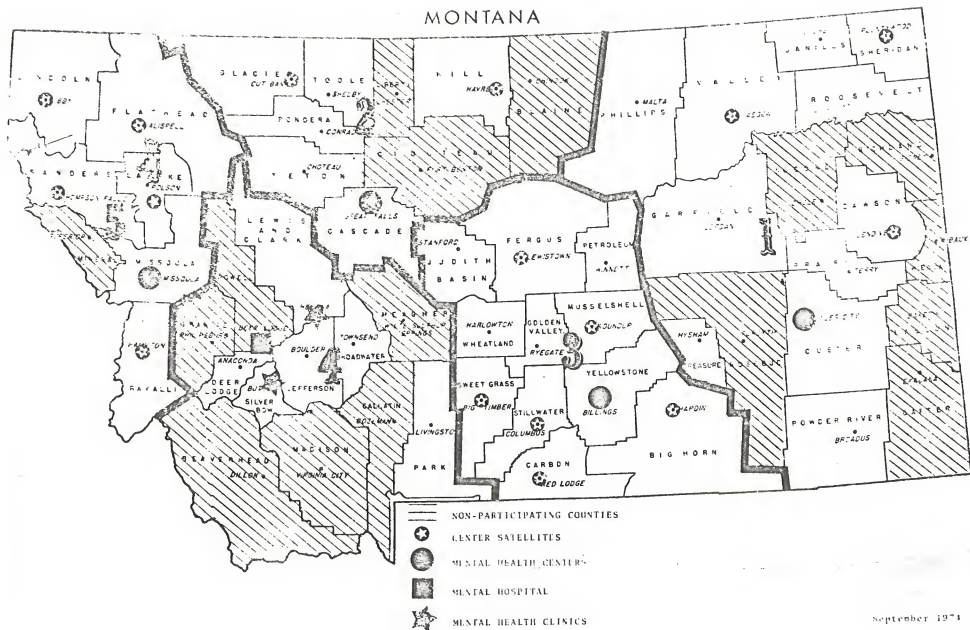
MONTANA



Family Planning Programs

*Mental Health Regions, Centers
Satellites, Clinics + Hospitals*

MONTANA



September 1971

Rehabilitation Facilities & Districts

Mappi District: 2590



No. 1050 — County Outline Map
STATE PUBLISHING COMPANY
Helena
80 Pads - E-WY

- + Rehabilitation work oriented facility
- # Audiological facility
- * Work study program

1974- Montana State Plan For Rehabilitation Facilities for the Establishment and Improvement of Rehabilitation Work-Oriented Facilities, Radically Oriented Centers, Community Based Audiological Facilities, Work Activity Centers, Work Study Programs. May, 1974

Organized Public Health Departments

MONTANA

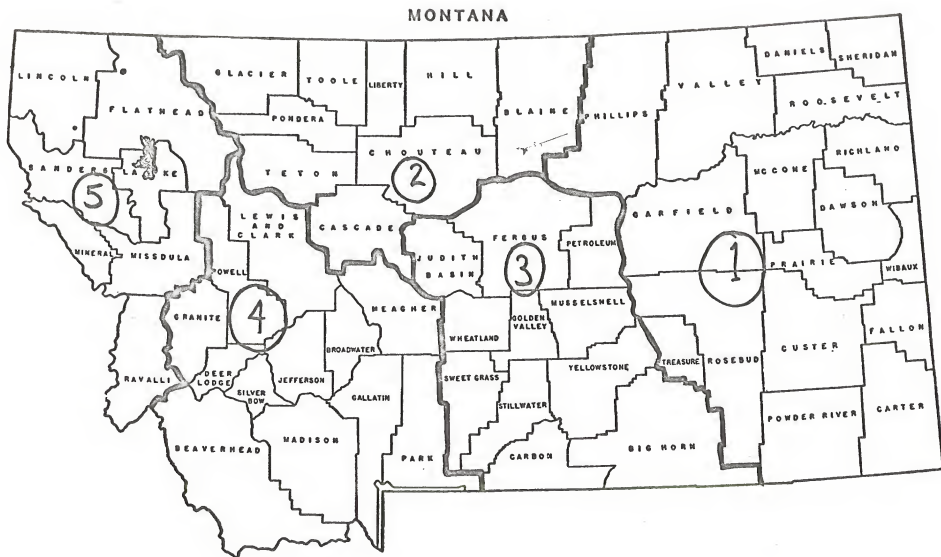


Drug & Alcoholism Inpatient Centers

MONTANA



CHP Planning Districts



Developmental Disabilities

MONTANA Centers & Regions



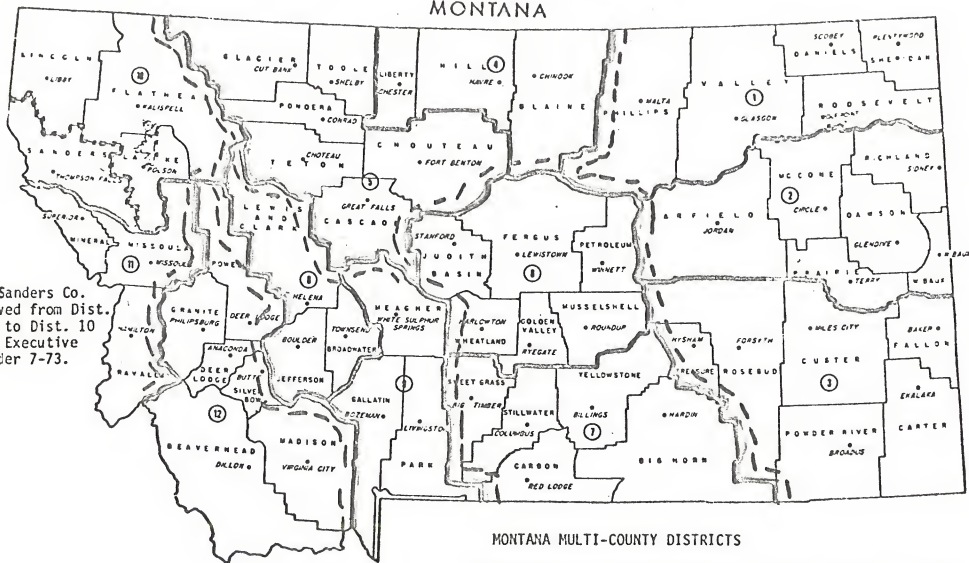
- REGION 1 — MISSOULA
- REGION 2 — GREAT FALLS
- REGION 3 — BOULDER
- REGION 4 — BILLINGS
- REGION 5 — GLENDALE

Developmental Disabilities

Governor's Monpower Planning Council Planning Districts

MONTANA

Sanders Co.
moved from Dist.
11 to Dist. 10
by Executive
Order 7-73.

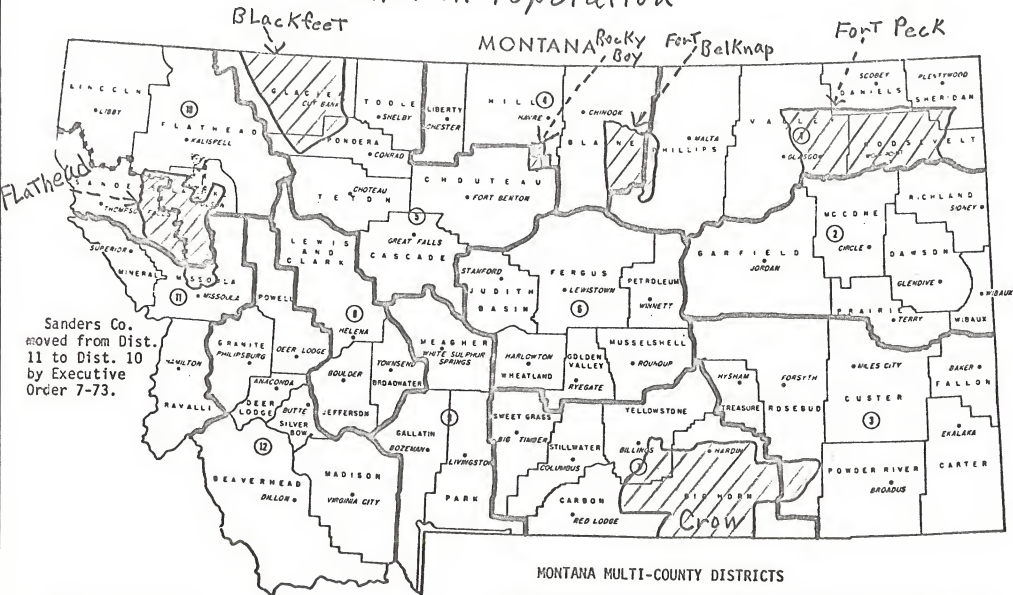


MONTANA MULTI-COUNTY DISTRICTS

Established by Executive Order 2-71, dated August 24, 1971
Amended by Executive Order 7-73, dated October 29, 1973

manpower

Indian Population



27,130 Indians (1970 census)
3.9% of total Population

Established by Executive Order 2-71, dated August 24, 1971
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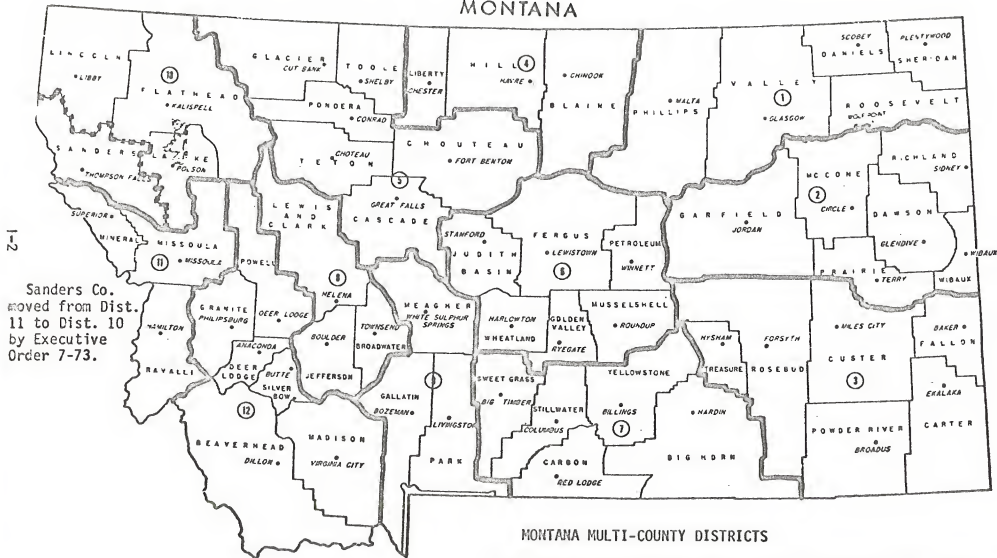
Economic Trade Areas

MONTANA



Source:
U.S. Dept. of
Commerce

MONTANA



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MONTANA MULTI-COUNTY DISTRICTS

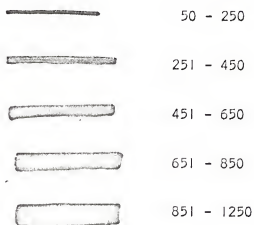
Established by Executive Order 2-71, dated August 24, 1971
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Explanation of POS Maps

The number in the box represents the percent of patients living in a planning district that stayed in the district for in-patient hospital care.

The percents with the arrows are the percentage of patients living in a planning district that went to another planning district for hospital care.

The width of the arrow lines indicates the number of patients travelling out of their planning district.



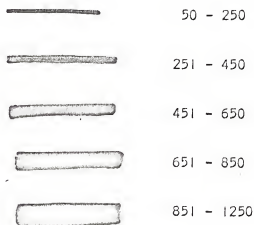
The reason districts 1 and 6 show small percentages of their population staying in the planning district is because the major hospital in that district did not participate in the POS.

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The reason districts 1 and 6 show small percentages of their population staying in the planning district is because the major hospital in that district did not participate in the POS.

5 HOSPITAL ADMISSIONS BY DISTRICT
RANK ORDER BY DISTRICT

District 11	Missoula	97%
District 5	Great Falls	97%
District 7	Billings	95%
District 8	Helena	90%
District 4	Havre	90%
District 12	Butte	87%
District 10	Kalispell	87%
District 2	Glendive	80%
District 3	Miles City	76%
District 9	Bozeman	63%
District 6	Lewistown	23%
District 1	Glasgow	12%

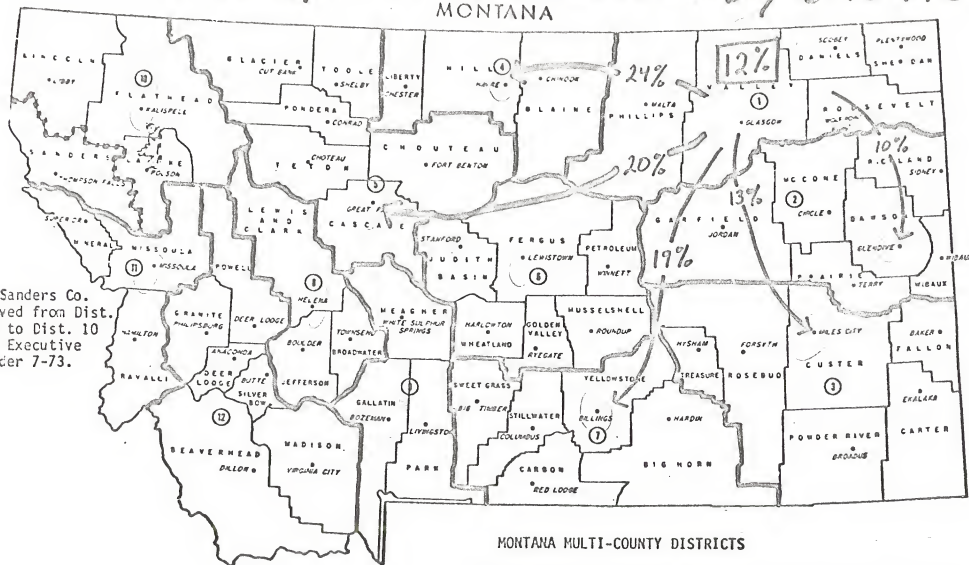
% HOSPITAL ADMISSIONS BY DISTRICT

Montana CHIP "A" Agency -- Patient Origin Study

		FROM											
		1	2	3	4	5	6	7	8	9	10	11	12
TO	1	151 12%	0 0%	2 0%	0 0%	2 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%
	2	134 10%	4964 80%	12 0%	0 0%	8 0%	0 0%	12 0%	0 0%	8 0%	14 0%	6 0%	0 0%
	3	168 13%	781 13%	4404 76%	13 0%	12 0%	34 2%	449 3%	6 0%	15 1%	0 0%	6 0%	18 0%
	4	318 24%	3 0%	0 0%	5717 90%	194 1%	0 0%	0 0%	0 0%	19 1%	27 0%	0 0%	0 0%
	5	261 20%	23 0%	7 0%	553 7%	18519 97%	650 33%	49 0%	328 4%	77 3%	142 1%	110 1%	260 2%
	6	0 0%	3 0%	0 0%	0 0%	0 0%	445 23%	9 0%	0 0%	3 0%	0 0%	0 0%	0 0%
	7	243 19%	369 6%	1066 19%	54 1%	99 1%	774 40%	15057 95%	81 1%	396 16%	9 0%	36 0%	36 0%
	8	6 0%	9 0%	9 0%	9 0%	36 0%	21 1%	0 0%	7922 90%	134 5%	27 0%	27 0%	235 2%
	9	0 0%	0 0%	0 0%	3 0%	6 0%	3 0%	74 0%	0 0%	1562 63%	0 0%	0 0%	12 0%
	10	9 1%	6 0%	0 0%	6 0%	79 0%	3 0%	0 0%	0 0%	9 0%	8839 87%	50 1%	14 0%
	11	14 1%	0 0%	153 3%	7 0%	60 0%	14 1%	141 1%	228 3%	223 9%	1034 10%	7683 97%	914 8%
	12	8 1%	9 0%	26 0%	0 0%	9 0%	3 0%	30 0%	237 3%	51 0%	30 0%	6 0%	10393 87%
TOTAL		1312	6167	5679	6362	19024	1947	15821	8811	2497	10122	7924	11882

% Hospital Admissions by District

MONTANA



Sanders Co.
moved from Dist.
11 to Dist. 10
by Executive
Order 7-73.

MONTANA MULTI-COUNTY DISTRICTS

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% Hospital Admissions by District

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MONTANA

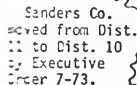


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% Hospital Admissions by District

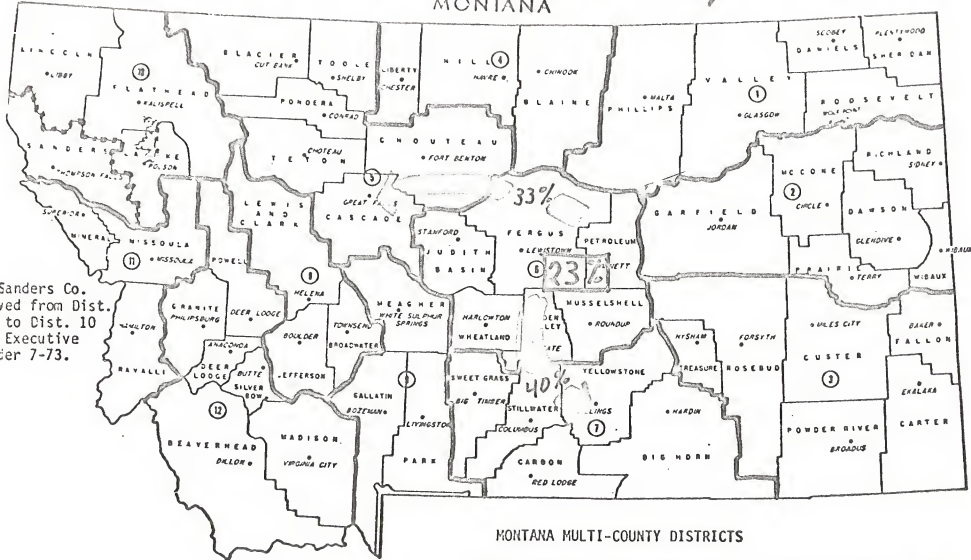
MONTANA



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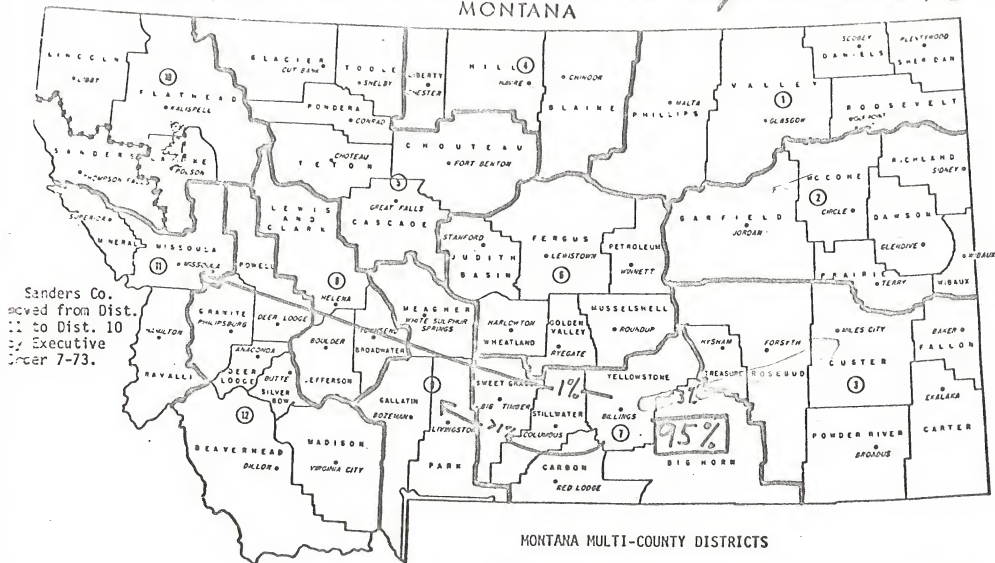


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% Hospital Admissions by District

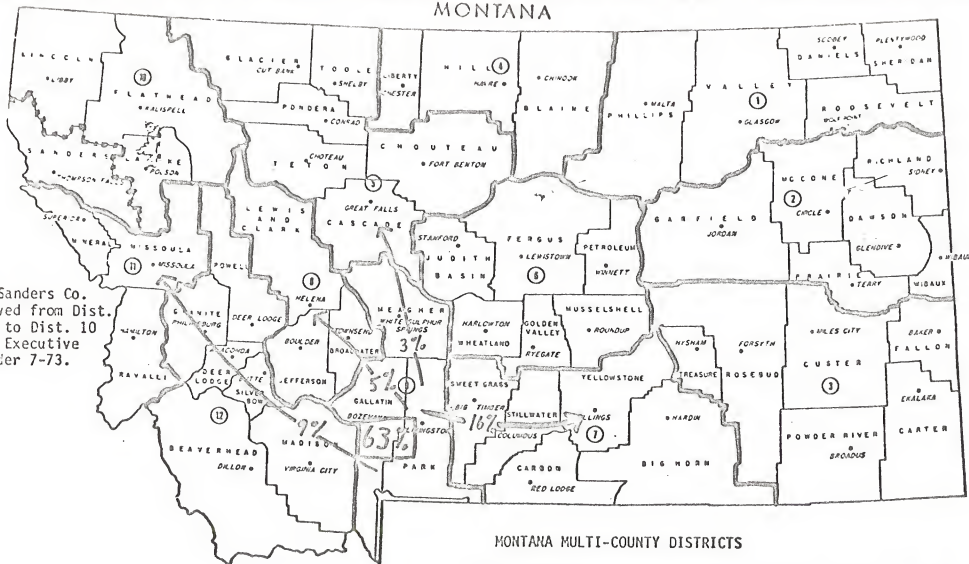
MONTANA



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7% Hospital Admissions by District

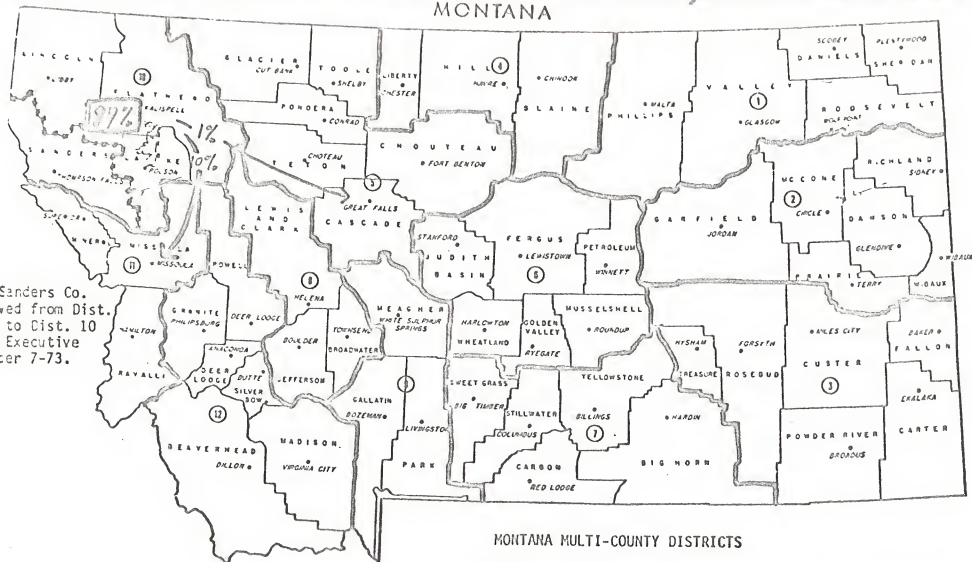
MONTANA



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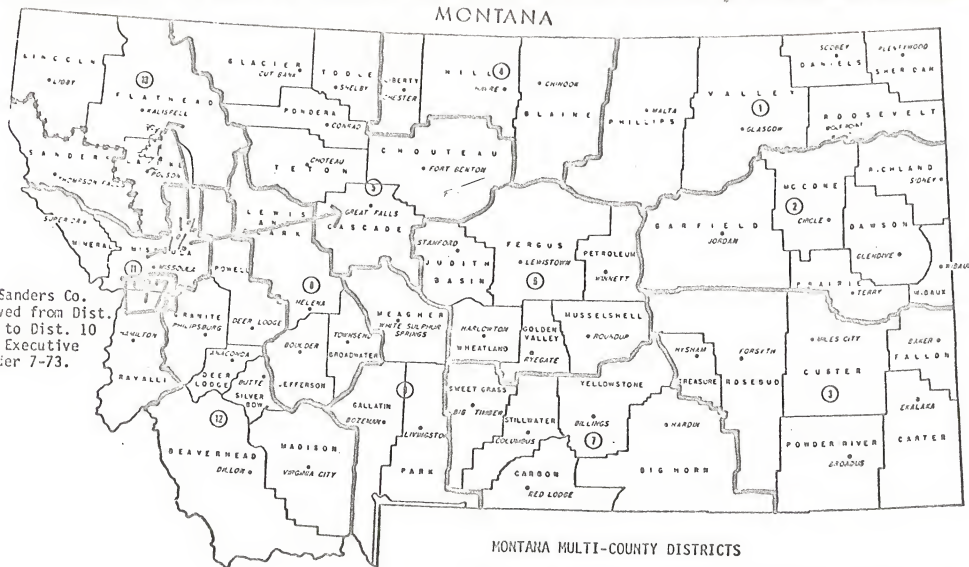
Established by Executive Order 2-71, dated August 24, 1971
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% Hospital Admissions by District MONTANA



Established by Executive Order 2-71, dated August 24, 1971
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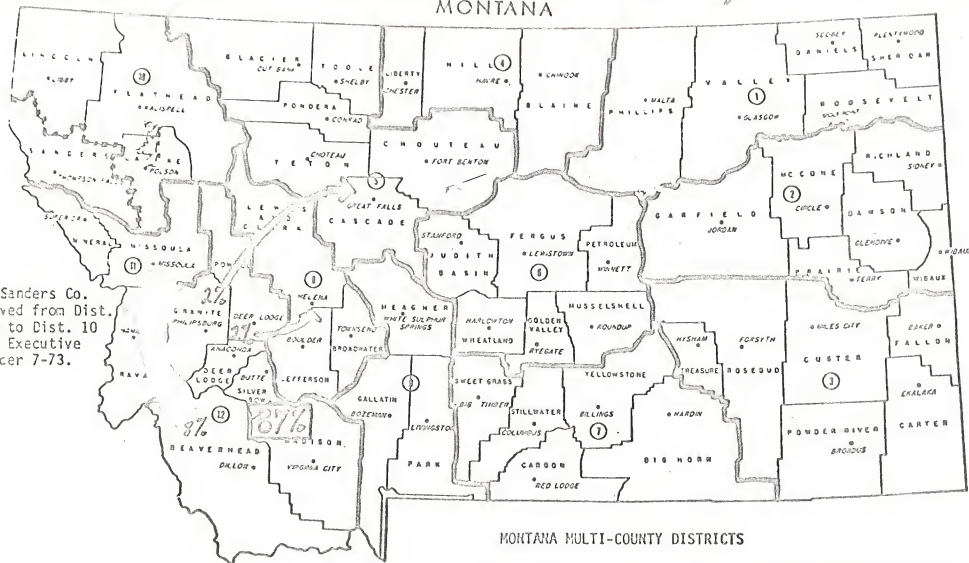
% Hospital Admissions by District



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% Hospital Admissions by District

MONTANA



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COMPUTERIZED SELECTION OF HSA AREAS

The selection of HSA areas -- three, four and five -- was derived from Patient Origin Study (POS) data. The latter represented hospital-patient utilization samples drawn over a four-month study period to account for seasonal bias.

Most, but not all, hospital facilities in Montana participated in the study. Yearly sample rates were also estimated -- a second source of possible error.

Of primary interest was the locale from which the patient traveled to acquire hospital care. Zip codes were designated first; zip codes were then located into counties; and, finally, counties lumped into the Governor's administrative districts. HSA areas were to be drawn along district borders only. This structure led to a simple matrix of migration, the vertical axis representing travel to each of the districts and the horizontal, travel from each of the districts (see Fig. 1). For example, the approximate number of patients who traveled from District VII to District III is found by scanning down the seventh column and across the third row (449). The fraction below, .005, represents the proportion of the total estimated hospital population traveling from District VII to District III.

The second step was to determine and rank the five centers of hospital usage by the migrating population. This was done simply by totaling each of the twelve rows, omitting, of course, the diagonal element since it represents non-migrating population. The highest total was then assigned the rank 1; the next highest total, the rank 2; and so forth. The resulting ranks were

found to be VII, XI, V, III and IV, respectively.

The following steps were repeated for three, four and five HSA selections. For simplicity, we show for the "three HSA" model only.

From the three HSA "centers", the remaining nine districts were attached according to the rule of maximizing migration usage -- both to the center and from the center.

For example, District VIII interacts with District VII in the .001 level (.001 plus .000), with District XI on the .002 level (.000 plus .002), and with District V on the .003 level (.003 plus .000). Therefore, District VIII would be grouped in the same HSA area as District V (its center).

In this manner each of the nine districts was "attached" to a center and the resulting geographic allocation drawn.

5 HSA-Proposed

MONTANA



No. 1072—County Outline Map
STATE PUBLISHING COMPANY
Helena

169 Pads - QQ - WQ

Region I 243,700
Region II 192,300
Region III 35,300
Region IV 64,000
Region V 165,200

sq. miles
32,982
33,122
32,143
24,350
21,762

pop. per sq. mile
7.6
5.8
1.7
2.6
7.6

HSA Proposal

Missoula County Boundary Post



Region	Area (sq. miles)	Population	Density (per sq. mile)
Region I	243,900	38,942	8.4
Region II	192,300	33,122	5.8
Region III	55,300	32,143	1.7
Region IV	229,200	41,112	5.0

